

Wilkinson, Davida

From: Manchester, Howie
Sent: August-29-18 5:13 PM
To: Waddington, Zac
Subject: Tofino Mort Events - August 2018

Follow Up Flag: Follow up
Flag Status: Completed

Hi Zac,

As we discussed, we discovered four unreported over threshold mort events during our Rant Point audit, these are as follows:

July 18, 18 – 2, 146 morts with a total biomass of 11 063 Kg during a one day mort retrieval
July 26, 18 - 978 morts with a total biomass of 5159 Kg during a one day mort retrieval.
August 6 – 10 – 1980 morts with a total biomass of 10380 Kg during a 5 day mort retrieval.
August 17, 18 – 771 morts with a total biomass of 4123 Kg during a 1 day mort retrieval.

This site runs uplifts daily and daily mortality with uplifts are around 200 / day, due to the size of the fish (5.4 Kg) the uplifts are inefficient, during dives the clean out has put the biomass over the reporting threshold on the above dates. The site has classified most of the unreported mort events as 'Old', environmental ([REDACTED] and low level harmful plankton) as well as some non performers.

Note that this site did report a mort event in June due to harmful algae but this event was resolved.

On further discussion with Michelle apparently they discovered an un reported mort event at Bedwell as well today. This occurred on July 13 , the mort count was 6788 @ 1.107 Kg to give a one day event of 7514 kg. Again this was due to inefficient uplifts followed by a mortality retrieval using divers. This was a clean out after hydrogen peroxide treatment in early July.

Let me know if you have any questions.

Thanks

Howie

s.16(2)(c)

s.20(1)(b)

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PROTECTED

Uploaded to AQUIS? ☐ Yes

Health & Mortality Management Plan (HMP) Inspection

(with reference to requirements of HMP and Conditions of Licence)

NB. Section 15.1: "Unless otherwise noted under specific conditions of this licence, the licence holder shall keep all records required by these conditions at this facility for the duration of the production cycle"

Operation Description and Information Reported to DFO

Inspection Date and Time: Aug 29 / 18

Paperwork prepared on: Aug 20 / 18

Paperwork prep. last updated on: _____

AQ Licence #: 115210 Company Name: Cermaq

Relevant Site Specific CoL: YES ☐ NO ☒ Details of SSCL: _____

Facility Name: Rant Point Facility Reference #: 526 FHAS Code: 2018-121 ✓

SL Code: A.2.3-148 ✓

Fish transfer inventory (s.2.1 - s.2.4; App I-All): _____ & approx. date of last transfer: March 2017

Source Facility (Facilities): 1. Oceans 2. Boat Lagoon 3. _____

Has this facility had previous DFO inspection(s) for this cycle of fish? YES ☒ NO ☐

If YES, complete the following:

Date of Previous Inspection	FHAS Code	SL Code	Deficiency	Have Déficiences Been Resolved	Any outstanding elements?
<u>30-May-18</u>	<u>2018-056</u>	<u>A.2.3-92</u>			
<u>26-Feb-18</u>	<u>2018-016</u>	<u>-</u>			
<u>28-Aug-17</u>	<u>2017-118</u>	<u>-</u>	<u>4.3</u>	<u>Yes</u>	

Note: If this facility has had a previous inspection for this cycle of fish, complete the sections of the checklist highlighted in gre: (depending on whether a sea lice audit was conducted this visit), those sections where a deficiency from a previous visit was indicated, and anything not previously assessed.



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***Please don't forget to write the inspection date and time on the first page**

Farm personnel interviewed: _____

HMP inspection conducted by DFO staff: _____

Additional activities on this inspection date: Fish Health ☒ Sea Lice ☒ Other: ☐ *

Current: Fish Inventory: _____ Average Weight: _____ Biomass: _____ Tonne

Biomass recorded on Facility's Aquaculture Licence: _____ 2640

- At a minimum, items highlighted in grey are assessed on each site visit.
- If the item assessed is deemed inadequate by DFO staff while onsite, the deficiencies are discussed with farm staff.
- Comments regarding the nature of the deficiency are required for any item marked "NO".
- Recommendations made to site staff are recorded in the comments section.
- This document is not considered finalized until the Field Supervisor has signed off on it (last page).

1. Biosecurity (s.4.1, App IV; HMP s.2)

1.1 Is a functional footbath present at all arrival locations?

YES ☒ NO ☐

1.2 Type of disinfectant used in bath:

Virkon ☒ Bleach ☐ Ovidine ☐ Pucks ☐ Other ☐

1.3 Is there a footbath at other critical traffic points on-site (i.e. ramps)?

YES ☒ NO ☐ NA ☐
Not Observed ☐

1.4 While on-site, was the footbath used by site staff?

YES ☒ NO ☐ Not Observed ☐

1.5 Is there evidence, other than footbaths, of minimizing potential pathogen transfer (i.e. sanitizers, sprayers, net dips, other)?

YES ☒ NO ☐

1.6 Are footbaths and disinfection liquid(s) disposed of in mort totes?

YES ☐ NO ☐ Other: _____

Visitor protocol (s.12.1 & 2; s.4.1; App IV; HMP s.2.5):

1.7 Are there signs directing visitors to a well-marked moorage areas / dock?

YES ☒ NO ☐

1.8 Are there signs indicating restricted moorage areas? (E.g. at mort float)

YES ☐ NO ☐

1.9 Are visitor protocols posted or explained at designated docking stations?

YES ☐ NO ☐

1.10 Are biosecurity procedures communicated?

YES ☐ NO ☐

2. Feed, Nutrition & Medication (s.4.1, App IV; HMP s.2.2.5 & s.2.10.1)

2.1 Is feed stored in a contained, protected location (not in weather elements)?

YES ☒ NO ☐

2.2 Are feeds on site within 'best before' date? (6mo. from production date)

YES ☒ NO ☐ NA ☐

2.3 Is feed, observed as being fed to fish, free of visible mould or contaminants?

YES ☐ NO ☐ Not Observed ☐

For medicated feed on-site (s.4.1; s.5.1b; App V-D; HMP s.2.10.2):

2.4 Is it recorded in the Rx file on-site?

YES ☐ NO ☐ NA ☐

2.5 Is medicated feed stored in clearly marked bags, easily distinguishable from non-medicated feed?

YES ☐ NO ☐ NA ☐

3. Monitoring Water Quality (s.4.1, App IV; s.5.1a; App V-C; HMP s.2.4)

3.1 Are microscopes and other plankton monitoring equipment available?

YES ☐ NO ☐ NA ☐: _____

3.2 Is equipment available for measuring water quality?

YES ☐ NO ☐ NA ☐: _____

3.3 Is equipment on-site to respond to blooms or low D.O. (e.g. tarps, bubble curtain, air compressors, etc.)?

YES ☐ NO ☐ NA ☐: _____

3.4 Are records of water quality on-site?

YES ☐ NO ☐ NA ☐: _____

3.4.1 If yes, are they up-to-date?

YES ☐ NO ☐ NA ☐

3.4.2 If yes, is there evidence of increased monitoring during poor water quality events (e.g. plankton bloom or low oxygen)?

YES ☐ NO ☐ NA ☐

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4. Fish Health - Carcass Retrieval Protocols (s.4.1, App IV; s.4.3; s.4.4a; s.7.5, App VII; s.9.2; s.9.3; HMP s.2.6)

If carcass retrieval occurred during this assessment:

NA ☐

☐ Check this box if DFO was not present to observe the carcass collection

4.1 If divers, are they following basic HMP biosecurity protocols?

YES ☐ NO ☐ NA ☒

4.2 Does staff wear raingear, gloves and rubber boots during collection?

YES ☒ NO ☐ NA ☐

4.3 Is any equipment & material, that may act as a potential source of contamination, disinfected between pens and/or is there an adequate barrier to transmission of potential pathogens?

YES ☒ NO ☐ NA ☐

4.4 Is there evidence of designated carcass containers?

YES ☒ NO ☐ NA ☐

4.5 Are the carcasses properly covered & contained to facilitate biosecurity?

YES ☒ NO ☐ NA ☐

4.6 If dead/wild finfish exist in the collection, are they documented & properly disposed?

YES ☒ NO ☐ NA ☐

☒ Observed ☐ Discussed

4.7 If any live wild finfish are caught during carcass collection, are they released outside the aquaculture facility immediately and in the least harmful manner?

YES ☒ NO ☐ NA ☐

☒ Observed ☐ Discussed

From records/observation: (s.4.1, App IV; s.4.4a; HMP s.2.6.2)

4.9 Are staff categorizing carcasses and are the category designations acceptable?

YES ☒ NO ☐

4.10 Is carcass collection performed by a known and effective method?

YES ☒ NO ☐

4.11 Method(s) used: Divers ☒ Pump ☒ Bottom rings ☐ Other: see comment

4.12 Is there a routine schedule for carcass collection from pens?

YES ☐ NO ☐

4.13 Is the frequency of mortality retrieval adequate?

YES ☒ NO ☐

Some characteristics of an adequate frequency of collection include: minimizing predator attraction, minimizing the potential spread of pathogens, and facilitating the early detection of disease.

4.14 Is the mort storage location secure and does it meet biosecurity principles?

YES ☐ NO ☐ NA ☐

4.15 Type of mort storage? Mort Float ☐ Ensilage ☐ other ☐

5. Fish Health Husbandry Records (s.2.1, App II, s.2.2, App III; s.2.3; s.2.4; s.4.1, App IV; s.4.3; s.4.4a; s.4.5; s.5.1, App V-C & D; s.5.2; s.7.4 App V-B; App IV; s.15.1; HMP: s.1.1.3, 2.5.3, & s.2.7)

Do written or computer records address:

5.1 Mortality number or rate?

YES ☐ NO ☐ NA ☐

5.2 Carcass classifications?

YES ☐ NO ☐ NA ☐

5.3 Sampling events (if any)?

YES ☐ NO ☐ NA ☐

5.4 Is this a single year class production unit?

YES ☐ NO ☐ NA ☐

If NO or NA, list mitigative actions to minimize this risk:

5.5 Is this a single species production unit?

YES ☐ NO ☐

5.6 Is the licence onsite, current and valid (i.e. not superseded)?

YES ☐ NO ☐ NA ☐

5.6.1 Are all species being cultured onsite listed on the licence (s.2.1)?

YES ☐ NO ☐ NA ☐

5.7 Is there written confirmation of in/out fish transfers?

YES ☐ NO ☐ NA ☐

5.7.1 For transfers within zone, are health attestation(s) attached? (s.2.1d; s.2.2; s.2.3)

YES ☐ NO ☐ NA ☐

5.7.2 Are ITC licences available from the previous facility? (s.2.4; HMP 2.5.3)

YES ☐ NO ☐

5.7.3 For transfers across zone, DFO reviewed between zone FH inspection reports (i.e. PCR lab results)?

5.7.4 Are treatment records from the previous facility accessible encompassing 90 days

YES ☐ NO ☐ NA ☐ hatchery

(therapeutants), 21 days (anaesthetics) prior to the 1st transfer date to the current facility? (s.5.1b; App V-C&D)

5.8 Prescription records are current (eg. TMS, antibiotics, SLICE)?

YES ☐ NO ☐ NA ☐

5.8.1 Is daily administration of med feed recorded (i.e. pens & amounts)?

YES ☐ NO ☐ NA ☐

5.9 Other types of mitigative actions logged (i.e. net changes, split fish, etc.)?

YES ☐ NO ☐ NA ☐

5.10 Are carcass evaluations, sampling by fish health staff and corresponding dates recorded? (s.5.1; App V-C)

YES ☐ NO ☐ NA ☐ in town

5.11 Indications that fish health and mortality records can be, or are reviewed by the company veterinarians or fish health staff? (s.5.2; App V-C; s.15.1)

YES ☐ NO ☐ NA ☐ in town

5.12 Are there training records indicating all facility staff have read and abide by the HMP and relevant SOPs? (App IV; HMP s.1.1.3) Name of record checked:

YES ☐ NO ☐ NA ☐

Date:

5.13 Are relevant and current SOPs of the HMP on-site?

YES ☐ NO ☐

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6. SEA LICE

If Pacific salmon:

Do records indicate quarterly sea lice monitoring and document lice abundance? (s.6.6) YES ☐ NO ☐ NA ☒

If Atlantic: (Atlantic, s.4.1; s.6; App.VI)

Sea lice sampling occurred during this inspection? ☒ SL Audit not scheduled to occur (go to section 6.8). NA ☐

SL Handling Procedures (s.4.1, App IV; s.6.3; App VI; s.9.1; HMP 2.6.3.1 & 2.6.3.2)

If lice counts occurred during this HMP assessment:

- 6.1 Are staff following fish-gathering protocols (i.e. Crowding first then random selection)? YES ☒ NO ☐ NA ☐
- 6.2 Method of capture was: Large seine ☐ Box seine ☒ Shallowed net ☐ Chum/dip ☐ Other ☐
- 6.3 Are staff using anaesthetic properly (i.e. able to handle fish in 1 - 2 minutes)? YES ☒ NO ☐ NA ☐
- 6.4 Are fish adequately contained (catch nets, low stress, and adequate tote size)? YES ☒ NO ☐ NA ☐
- 6.5 Are staff handling fish to ensure accurate lice enumeration? YES ☒ NO ☐ NA ☐
- 6.6 Are staff handling fish in a manner that minimizes fish stress and trauma? YES ☒ NO ☐ NA ☐
- 6.7 Are staff categorizing the lice into required life-stages and species? YES ☒ NO ☐ NA ☐

From records: (s.6.4; s.6.5; s.7.1, App.VI-A; s.15.1a(i))

6.8 Do counts, last reported by farm to DFO, agree with facility records? YES ☐ NO ☐ NA ☐

6.8.1 Is the SW entry date, in the above record (last reported SL, App.VI-A) reported correctly (i.e. is a direct entry date from the hatchery to SW)? YES ☐ NO ☐ NA ☐

6.9 If an average of >3 motiles/fish has been experienced by this farm in the past 3 months, has monitoring increased to at least biweekly? YES ☐ NO ☐ NA ☐

Do sea lice records address: (s.4.1, App IV; s.6.3-6.5, App VI; HMP 2.6.3.2)

- 6.10 All sea lice assessment dates and count results? Last date: _____ YES ☐ NO ☐ New Entry ☐
- 6.11 Three groups of 20 fish within a monthly, or semi-monthly, assessment? YES ☐ NO ☐ New Entry ☐
- 6.12 Is there a designated reference population identified in records? YES ☐ NO ☐ New Entry ☐
- 6.13 Is that reference population known and sampled by staff each count? YES ☐ NO ☐ New Entry ☐

7. Fish Handling, Euthanasia, Welfare (s.4.1, App IV; s.4.4b, App V-A; s.4.5, App V-B; s.15.1; HMP s.2.3, s.2.6.3.4)

7.1 If major culls/euthanasia events occurred, have they been recorded? YES ☐ NO ☐ NA ☐

7.1.1 Do the records indicate the method of euthanasia or anaesthesia? YES ☐ NO ☐ NA ☐

8. Disease Outbreak / Kill Contingency Plan (s.4.1, App IV; s.4.4b, App V-A; s.4.5, App V-B; s.15.1; HMP s.2.8)

8.1 Is the contact list for the fish health expertise/ team readily available? YES ☒ NO ☐

8.2 Is the Manager/staff aware of company procedures to deal with suspected fish disease outbreaks or disease emergencies? YES ☐ NO ☐

8.3 The manager (or senior staff onsite) is aware of, or can locate onsite, the definition of a mortality event (notification threshold) and the company procedures to deal with the event? YES ☒ NO ☐

Did action or inaction by the licence holder result in:

Audit was: rescheduled, replaced or cancelled? ☐

- Forfeit or postponement of the sampling or audit event; and/or
- Potentially diminish the integrity of the sample data or audit intent?

Explain: _____

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The on-site inspection conducted on this day is not intended to be inclusive of all licence conditions. Any "NO" or "NA" items identified and noted below by DFO staff may be considered deficient, inadequate or items of concern on this day and may require further explanation or action by the Licence Holder. These noted items will specifically be revisited by DFO staff. Once information has been entered, this document is considered sensitive and protected pursuant to Section 20 of the Access to Information Act.

HMP INSPECTION RESULT:

This facility had _____ inspection items checked YES from a total of _____ * applicable inspection items

*If an inspection item is not applicable (NA) then that line item is subtracted from the maximum total (eg. 67 - 14 NA's = 53).

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3	8	8
TOTALS	24	24

The line items assessed as "NO" (i.e. deficient or inadequate) by DFO staff during this inspection on this day were: 0

Comments:

Previous deficiencies or notes to recall from past audits:

4.10 - meat #5 during dives 2-3x higher
on dive day due to large size of
fish not going up the up lift. 3g
(blowing)



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DFO staff observations concerning other COLs or the Fisheries Act may require C&P attention.

YES ☐ NO ☒

HMP Photos taken?

YES ☐ By whom: _____

NO ☒

Photo Details

Name [format: Facility Reference # - FHAS Code - Fish (if applicable) & sequence (a, b, c...)].jpg] and Description

Example: 1082-2014-007-1a.jpg Description: Necropsy Fish #1

Photo 1: _____	Description: _____
Photo 2: _____	Description: _____
Photo 3: _____	Description: _____
Photo 4: _____	Description: _____
Photo 5: _____	Description: _____

Fisheries and Oceans (DFO) staff signature: _____

Date: Sept 4/18

Print name: H Manchester

To be completed by Fisheries and Oceans (DFO):

Date reviewed by Field Supervisor: Sept 4/18

Signature: _____

Print Name: H Manchester

If photos taken, they have been titled, dated & filed according to Facility Reference #? YES ☐ NO ☐ NA ☐

C&P staff was contacted to follow-up concerns noted during this audit. YES ☐ Date: _____ NO ☐ NA ☐

A scanned copy of the finalized HMP was uploaded to AQUIS: YES ☐

A letter was sent to the licence holder regarding this site visit: YES ☐ NO ☐

The Licence Holder's Fish Health Rep was subsequently contacted by DFO: YES ☐ NO ☐ NA ☐

DFO Veterinarian signature: _____

Date: _____

Print name: _____

Additional Veterinary comments:



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Mortality Events (ME):

Date Last Assessed: May 30/18

Conduct 60day review of mortality prior to audit date (up to last assessed date)

Check completed: YES ☐ NO ☐

1) Mortality Event reports (App V-A: s4.4b): YES ☒ NO ☐

Date of ME (DD-MM-YY)	<u>05-Jun-18</u>		
Date ME reported (DD-MM-YY)	<u>06-Jun-18</u>		
Latest ME Follow-up date (DD-MM-YY)	<u>18-Jun-18</u>		
Cause (List all)	<u>Algae Bloom (Hetero)</u>		
Details confirmed onsite (Y/N)			

If any ME reported are inaccurate:

Collect 1 week of mort information on both sides of the ME date range.

Collected: YES ☐ N/A ☐

Other onsite information collected that may indicate cause of ME (environmental conditions, DO, Plankton information, etc)?

YES ☐ NO ☐

Did the company's Fish Health staff visit the site during the time of the event?

YES ☐ NO ☐ N/A ☐

If elevations in mortality are noted, use the following table to calculate site specific thresholds.

Biomass of fish * current average weight	24 hrs:	4000kg / Avg. fish weight (kg)*	=	fish
	5 days:	10,000kg / Avg. fish weight (kg)*	=	fish
Percentage of fish ** inventory at beginning of 60 days	24 hrs:	0.02 x inventory **	=	fish
	5 days:	0.05 x inventory **	=	fish

2) Additional Mortality Events noted: YES ☒ NO ☐

Date (DD-MM-YY)	<u>July 18/18</u>	<u>July 26/18</u>	<u>Also Aug 17/18</u> <u>Aug 6-10/18</u>
Cause (check site records)	<u>Hetero ENV + old (Dive)</u>	<u>ENV + old (Dive)</u>	
Office Use Only Rpt'd to DFO (Y/N)	<u>N</u>	<u>N</u>	<u>N</u>

(11 063 kg) 24h

(5159 kg) 24h

> 10 tonnes - 5 day

If additional ME(s) is/are indicated:

Collect 1 week of mort information on both sides of the ME date range.

Collected: YES ☒ N/A ☐

(If suspect ME collect weight by pen and inventory for specific date(s) at potential ME.)

Did the company's Fish Health staff visit the site during the time of the event?

YES ☐ NO ☐

Other onsite information collected that may indicate cause of ME (environmental conditions, DO, Plankton information, etc)?

YES ☐ NO ☐

Comments: Reviewed ENVIRO DATA, NO ENVIRO ISSUES
existed but appeared to be due to inefficiency
of up lifts -> to more Dives

Office Use Only

DFO Veterinarian informed of potential ME

YES ☒ N/A ☐

Confirmed -- unreported ME occurred

YES ☒ N/A ☐



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Fish Health Events (FHE):

Date Last Assessed: May 30/18
*only assess FHE back to this date

Vet diagnosis at this facility? (App V-B):

YES ☐ NO ☒

Vet Diagnosis details:

Incident Date (DD-MM-YY)			
Reported Date (DD-MM-YY)			
Latest Rpt of Ongoing FHE (DD-MM-YY)			
Cause			
Incident Date noted on site (Y/N)			
Previous Notable FHE Comments	<u>Maxhrot June 2017 - Aug 2017</u> ✓ <u>SRS Oct 2017</u> ✓ <u>Sep 2017 (Cull)</u>		

Vet diagnosis at previous marine facility*? (App V-B): (Limit to 90d from 1st day of transfer)

YES ☐ NO ☐

N/A Hatchery ☒

If yes,

SOURCE				
CAUSE				
DATE (DD-MM-YY)				

Reported Therapeutant Use (s.4.5d; s.5.1b; 7.4; App V-B, C & D):

Last Quarter data available? Q2 2018

Date (MM-YY)				
Therapeutant				
Cause				
Confirmed on site (Y/N)				

Additional Therapeutant Use noted at audit not indicated above (s.4.5d; s.5.1b; 7.4; App V-B, C & D): YES ☐ NO ☒

Date (DD-MM-YY)			
Therapeutant			
Cause			
For Office Use Rpt'd to DFO (Y/N). If yes, date.			

* collect any relevant documentation for unreported use listed above that may support the FHE (i.e. copy of treatment log, Rx etc)

Comments:

No Recent Slize or H2O2 done at this site. Plan for H2O2 stopped.

Office Use Only

DFO Veterinarian informed of potential FHE
Confirmed -- unreported FHE occurred

YES ☐ N/A ☒
YES ☐ N/A ☒



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Sea Lice (SL) Treatment Information and Above Threshold:

Average Lice Abundance from Submitted Reports (s7.1, App. VI-A): Requires assessment YES ☐ NO ☒

Date Passed Assessment: 26-Feb-18

If not assessed, or if a previous deficiency, attach a printout of the most recent submitted SL assessment available. Date(s): _____; pens: _____; & reference pen: _____.

Any dates where ">3 trigger" was reached in past 3 months?

YES ☒ Date: 30-May-18 NO ☐ 9.79 motiles

H₂O₂ for June? Planned

Sea Lice Calculator

Secondary Caligates:							
Index	Pen #	Female:	Female Gravid:	Male:	Immature:	Chalimus:	Caligus:
Sub totals:							
		FEMALE		NON-FEMALE			
TOTAL:		MOTILE				CHALIMUS	CALIGUS

* Note: If the on site SL does not match the reported SL for the given dates, please retain a copy of the on site records for the given date and pens.

2018-121

	Mortality biomass [kg]	Mortality biomass rate [%]	Mortality count	Mortality rate [%]
Date: 28/06/2018	877	0.04	174	0.04
Date: 29/06/2018	2,482	0.12	514	0.12
Date: 30/06/2018	456	0.02	93	0.02
Date: 01/07/2018	661	0.03	136	0.03
Date: 02/07/2018	701	0.03	141	0.03
Date: 03/07/2018	878	0.04	176	0.04
Date: 04/07/2018	790	0.04	160	0.04
Date: 05/07/2018	662	0.03	128	0.03
Date: 06/07/2018	721	0.03	142	0.03
Date: 07/07/2018	1,566	0.07	313	0.07
Date: 08/07/2018	1,245	0.06	247	0.06
Date: 09/07/2018	3,064	0.14	* 608	0.14
Date: 10/07/2018	0	0.00	0	0.00
Date: 11/07/2018	1,797	0.08	351	0.08
Date: 12/07/2018	696	0.03	138	0.03
Date: 13/07/2018	1,674	0.08	325	0.08
Date: 14/07/2018	1,271	0.06	247	0.06
Date: 15/07/2018	1,873	0.09	370	0.09
Date: 16/07/2018	1,710	0.08	341	0.08
Date: 17/07/2018	1,915	0.09	375	0.09
Date: 18/07/2018	11,063	0.52	* 2,146	0.51
Date: 19/07/2018	834	0.04	161	0.04
Date: 20/07/2018	1,516	0.07	290	0.07
Date: 21/07/2018	1,488	0.07	282	0.07
Date: 22/07/2018	806	0.04	152	0.04
Date: 23/07/2018	883	0.04	170	0.04
Date: 24/07/2018	924	0.04	179	0.04
Date: 25/07/2018	1,180	0.05	223	0.05
Date: 26/07/2018	5,159	0.24	* 978	0.23
Date: 27/07/2018	463	0.02	89	0.02
Date: 28/07/2018	889	0.04	169	0.04
Date: 29/07/2018	757	0.03	143	0.03
Date: 30/07/2018	1,378	0.06	257	0.06
Date: 31/07/2018	1,746	0.08	320	0.08
Date: 01/08/2018	1,561	0.07	298	0.07
Date: 02/08/2018	2,405	0.12	451	0.12
Date: 03/08/2018	565	0.03	110	0.03
Date: 04/08/2018	1,302	0.07	243	0.07
Date: 05/08/2018	724	0.04	138	0.04
Date: 06/08/2018	3,572	0.19	* 689	0.19
Date: 07/08/2018	1,397	0.08	269	0.08
Date: 08/08/2018	1,309	0.07	249	0.07
Date: 09/08/2018	1,128	0.06	207	0.06
Date: 10/08/2018	2,973	0.17	* 566	0.17

- old + Enviro + NP

- Dive (old + Env + NP)

- ME (Dive)
(old, NP; Enviro)

- ME (Dive)
(old, Env, NP)

- ME (Dive + Harvest)
next Dive

* Need to confirm dive exp

2018-121

Date: 11/08/2018	346	0.02	64	0.02
Date: 12/08/2018	517	0.03	97	0.03
Date: 13/08/2018	1,098	0.06	206	0.06
Date: 14/08/2018	947	0.05	179	0.05
Date: 15/08/2018	870	0.05	167	0.05
Date: 16/08/2018	1,094	0.06	202	0.06
Date: 17/08/2018	4,123	0.23	771	0.23
Date: 18/08/2018	810	0.04	152	0.05
Date: 19/08/2018	835	0.05	154	0.05
Date: 20/08/2018	713	0.04	128	0.04
Date: 21/08/2018	796	0.04	146	0.04
Date: 22/08/2018	643	0.04	118	0.04
Date: 23/08/2018	796	0.04	145	0.04
Date: 24/08/2018	763	0.04	138	0.04
Date: 25/08/2018	1,303	0.07	234	0.07
Date: 26/08/2018	1,255	0.07	225	0.07
Date: 27/08/2018	838	0.05	151	0.05
Date: 28/08/2018	2,036	0.12	357	0.11
	90,847	4.39	17,392	4.06

- ME (Dive - ENV + old)
- Hetero sigma -
lower level

ENV - Fish showing shattered lamellae are considered enviro.

most Events - Unreported appear to be due to upl.f's not working adequately
; threshold is reached at most Dive
- most are classified as due to Environment ([redacted] + low level Integrated plankton) + old ; NPs.

Site	Audit Date	Issue	Issue Date	Comment
Rant Point	29-Aug	Unreported ME	18-Jul-18	<p>Mortality count: 2146 ; biomass: 11063 (c and environmental) - the unreported even working adequately due to the size of the ME threshold is reached. Environmental ai along with low level harmful.</p> <p>In addition to the July 18 event, there wen discovered during this audit :</p> <ul style="list-style-type: none"> - July 26, 2018 number: 978 biomass: 51 - August 6 - 10 number: 1980 biomass: 10 - August 17 number: 771 biomass: 41

Best available copy

NOTIFICATION REPORT - PHONE LOG FORM

NOTE: A phone notification does not preclude the requirement of a written notification by the licensee.

Type of Notification:	Mortality Event <input checked="" type="checkbox"/>	Fish Health Event <input type="checkbox"/>
Date of Call:	<u>Prod - Aug 29, 2018</u>	Time of Call: <u>11:00 AM</u>
Licence Holder Name:	<u>Cermaq Canada</u>	
Facility Name:	<u>Rant Pt</u>	Facility Ref. #: <u>526</u>
Date of Incident/Initiation of Treatment:	<u>July 18, 18</u>	Fish Health Zone: <u>2-3</u> Fish Type: <u>Atlantic</u>
Production Category:	<u>production</u>	Current Inventory #: _____ Avg. Wt.: _____

MORTALITY EVENT		
Description of Incident: <u>Non Reported ME - 4 TOTAL</u>		
Suspected # of Carcasses:	Suspected % Affected:	Suspected Carcass Biomass:
<u>2146</u>		<u>11063 kg</u>
Probable Cause or Diagnosis: <u>See attached - note 3 other ME's</u>		
Action Taken: <u>Mort collection</u>		

FISH HEALTH EVENT	
Veterinary Diagnosis:	Occurrence Category:
Mitigation:	Length of Treatment:
Comments/Details:	

FOLLOW-UP	
Official e-mail received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Date of e-mail:
DFO Veterinary Follow-up required: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
Date DFO Veterinary Follow-up completed:	
Follow-up Comments:	

✓ Entered all 4 non-notifications into comp. today

Wilkinson, Davida

From: Waddington, Zac
Sent: September-12-18 1:18 PM
To: [REDACTED]
Cc: AQFF.FishHealth (DFO/MPO)
Subject: Non-compliance at Rant
Attachments: Cermaq ME non-reporting Sept. 12, 2018.pdf

During an audit of the Rant Point facility conducted by DFO on August 29th, it was discovered that Cermaq had failed to identify, and therefore report, a mortality event a subsequent mortality which should have triggered 10-day follow up reports. Please see the attached non-compliance letter outlining the details and required follow-up actions by Cermaq.

During an audit of the Bedwell facility on August 29th, 2018 it was noted that the mortality count on July 13th, 2018 exceeded the threshold for reporting in the COL. There was apparent issues with ineffective uplifts and therefore mortality counts over the 10 days prior. Nonetheless, the one day trigger was met and should have been reported with the mitigating circumstances articulated. I would ask that you do so within the next week, and provided you can demonstrate that neither the one day or five day mortality trigger was violated, then the event will not be recorded in our records as a mortality event.

Thanks very much for your cooperation,

Dr. Zac Waddington DVM, B.Env.Sc.(Hons)
Lead Veterinarian - Pacific Region
Fisheries and Oceans Canada | Pêches et Océans Canada
Aquaculture Environmental Operations - Fish Health
Courtenay, British Columbia
Telephone | Téléphone: 250-703-0902
Fax | Télécopieur: 250-703-0921
Zac.Waddington@dfo-mpo.gc.ca

s.19(1)



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Pacific Region - Fish Health Unit
103 - 2435 Mansfield Drive
Courtenay, British Columbia
V9N 2M2

Région du Pacifique - Santé de poisson
103 - 2435 Drive Mansfield
Courtenay (C.-B.)
V9N 2M2

September 12, 2018

Cermaq Canada
203-919 Island Highway
Campbell River, BC V9W 2C2

Dear Licence Holder;

Subject: Non-compliance regarding licence condition AQFF115210

Section 4 of the *Pacific Aquaculture Regulations* states; "For the proper control of fisheries and the conservation and protection of fish, the Minister may specify, in addition to the matters set out in subsection 22(1) of the *Fishery General Regulations*, conditions in an aquaculture licence".

This letter is to inform you that Fisheries and Oceans Canada (DFO) has conducted a review of your Condition of Licence (COL) 4.4(b) which states:

a mortality event procedure, which will include:

(i) notification to the Department of a mortality event defined in Part A "Mortality Event" not later than 24 hours after discovery, providing as much detail as outlined in Appendix V-A;

We have determined that you have failed to comply in the following manner;

- The detection of the "mortality event" (as defined in **Part A. Definitions** of the licence) did not occur, and resultantly there was a failure to notify the department within the required timeframe.

The mortality event in question occurred at the Rant Point facility, beginning on July 18th, with ongoing mortalities which warranted subsequent 10 day mortality event notifications for approximately 4 weeks.

The Department requires that you:

- Submit completed reports (including an initial mortality event and subsequent 10 days reports) within one week of receiving this letter.

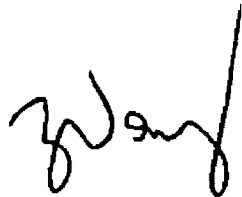
This occurrence of non-compliance is being recorded and will form your compliance history and will be considered in response to future occurrences of

Canada

non-compliance. You should be aware that Section 78.1 of the *Fisheries Act* states "Where any contravention of this Act or the regulations is committed or continued on more than one day, it constitutes a separate offence for each day on which the contravention is committed or continued". This letter does not preclude any legal action this Department may take with respect to this matter.

DFO is committed to working with you to resolve this issue. Please feel free to contact Zac Waddington (Zac.Waddington@dfo-mpo.gc.ca) if you have any questions or concerns regarding this matter at 250-703-0902. All reports are to be sent to the following E-Mail address: Marine.Finfish.Aquaculture@dfo-mpo.gc.ca.

Sincerely,

A handwritten signature in black ink, appearing to read 'Zac Waddington', with a stylized, cursive script.

Dr. Zac Waddington DVM, B.Env.Sc.(Hons)

Lead Veterinarian - Pacific Region
Fisheries and Oceans Canada | Pêches et Océans Canada
Aquaculture Environmental Operations - Fish Health
Courtenay, British Columbia
Telephone | Téléphone: 250-703-0902
Fax | Télécopieur: 250-703-0921
Zac.Waddington@dfo-mpo.gc.ca

Wilkinson, Davida

From: [REDACTED]
Sent: September-20-18 4:38 PM
To: AQFF.FishHealth (DFO/MPO)
Cc: [REDACTED] RantPoint Farm
Subject: *Confidential: Fw: COL4.4b - Cermaq Ref # 526 Summary Report
Attachments: 2018-07-18 COL 4.4b - Rant Ref# 526.xlsx

Categories: Purple Category, Green Category

Hello,

Please find attached our summary report related to the mortality event that commenced on July 18th.

Thanks



CERMAQ

Phone +1 250-286-0022
Direct +1 250-286-0022 ext. [REDACTED]
Mobile [REDACTED]

Cermaq Canada Ltd.
#203-919 Island Highway
V9W 2C2 Campbell River, BC, Canada

[Cermaq.ca](#) [Facebook](#) [Twitter](#)

----- Forwarded by [REDACTED] /Ca/Mainstream/Cermaq on 20/09/2018 04:30 PM -----

From: [REDACTED] /Ca/Mainstream/Cermaq
To: AQFF.FishHealth@dfo-mpo.gc.ca
Cc: [REDACTED] RantPoint
Farm/ [REDACTED]
Date: 20/09/2018 04:30 PM
Subject: *Confidential: COL4.4b - Cermaq Ref # 526

Hello

This is notification that a mortality event was triggered at our Rant Point Facility on July 18th as a result of harmful Algae.

We have removed 11,063kg of fish (2146pcs). A follow up report will be submitted with the complete numbers.

Thanks

s.16(2)(c)

s.19(1)

s.20(1)(b)

The information contained in this message may be CONFIDENTIAL. If you are not the addressee, please notify the sender immediately by return e-mail and then delete this message.

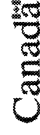
Any unauthorised use, dissemination of the information or copying of this message is prohibited.

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Fisheries and Oceans
Pêches et Océans
Canada

Best available copy



APPENDIX V-A:

URGENT NOTIFICATION (& FOLLOW-UP REPORTS) OF MORTALITY EVENTS

Discovery date of event mm/dd/yyyy	Fish Health zone	Facility Reference #	Company name	Facility name	Fish type cultured	Fish production category	Suspected No. of fish dead or affected	Suspected proportion affected (%)	Suspected carcass biomass (kg)	Event type	Probable cause or diagnosis	Action taken	Information Relevant to Ewe algae, environmental, con other contex
07/18/2018	2-3	526	Cermaq Canada	Rant Point	Atlantic	Production	2,146	0.51%	11,063	Mortality Event	Algae bloom	Ongoing monitoring	Heterosigma. Bloom mitigation
07/19/2018							161	0.04%	834			Ongoing monitoring	
07/20/2018							290	0.07%	1,516			Ongoing monitoring	
07/21/2018							282	0.07%	1,488			Ongoing monitoring	
07/22/2018							152	0.04%	806			Ongoing monitoring	
07/23/2018							170	0.04%	883			Ongoing monitoring	
07/24/2018							179	0.05%	924			Ongoing monitoring	
07/25/2018							223	0.23%	1,180			Ongoing monitoring	
07/26/2018							978	0.02%	5,159			Ongoing monitoring	
07/27/2018							89	0.04%	463	Mortality Event	Algae bloom	Ongoing monitoring	High Counts of Ast
07/28/2018							169	0.03%	889			Ongoing monitoring	
07/29/2018							143	0.06%	757			Ongoing monitoring	
07/30/2018							257	0.08%	1,378			Ongoing monitoring	
07/31/2018							320	0.07%	1,746			Ongoing monitoring	
1/8/2018							298	0.12%	1,561			Ongoing monitoring	
08/02/2018							451	0.03%	2,405			Ongoing monitoring	
08/03/2018							110	0.07%	565			Ongoing monitoring	
08/04/2018							243	0.04%	1,302			Ongoing monitoring	
08/05/2018							138	0.19%	724	10-day follow report		Ongoing monitoring	
08/06/2018							689	0.08%	3,572	Mortality Event	Algae bloom	Ongoing monitoring	
08/07/2018							269	0.07%	1,397			Ongoing monitoring	
08/08/2018							249	0.06%	1,309			Ongoing monitoring	
08/09/2018							207	0.17%	1,128			Ongoing monitoring	
08/10/2018							566	0.02%	2,973	Mortality Event	Algae bloom	Ongoing monitoring	10,380kg in 5 c
08/11/2018							64	0.03%	346			Ongoing monitoring	
08/12/2018							97	0.06%	517			Ongoing monitoring	
08/13/2019							206	0.05%	1,098			Ongoing monitoring	
08/14/2019							179	0.05%	947			Ongoing monitoring	
08/15/2019							167	0.06%	870			Ongoing monitoring	
08/16/2019							202	0.23%	1,084			Ongoing monitoring	
08/17/2019							771	0.05%	4,123			Ongoing monitoring	
08/18/2018							152	0.05%	810			Ongoing monitoring	
08/19/2018							154	0.05%	835	Summary report		Ongoing monitoring	

Explain:

Fish type
Atlantic
Chinook
Coho
Sablefish
Other-explain

Fish category
Production
Smolts
Brood
Other-explain

Event type:
Mortality Event
Disease of App.III
Infectious outbreak
Non-inf. Outbreak
Cull event
Toxic spill
10-day follow report
Summary report
Other - explain

Probable cause:
Low D.O.
Algae bloom
Toxic spill
Poor smolt
Excess crowding
Handling
Transport
Bathing
Bacterial
Viral
Predation
As yet unknown
Other -explain

Action taken:
None required
Resolved
Ongoing correction
Ongoing monitoring
Harvest
Treatment
Carcass removal
Cull
Other -explain



Ensuring Sustainable Fisheries

2018 - Q3 - Mort Event & FHE
Discrepancies / potential non
compliance

Site	Audit Date	Issue	Issue Date	Comment	Checked Compliance Tracking Sheet	M by C sheet	MAFF folders	Confirmed Unreported	Follow up Comment
Rant Point	29-Aug	Unreported ME	18-Jul-18	Mortality count: 2146; biomass: 11063 (classified as old, non performers and environmental) - the unreported event appear to be due to uplifts not working adequately due to the size of the fish and therefore on five days ME threshold is reached. Environmental are fish that have noted along with low level harmful. In addition to the July 18 event, there were three other unreported events discovered during this audit : - July 26, 2018 number: 978 biomass: 5159 - August 6 - 10 number: 1860 biomass: 10379 - August 17 number: 771 biomass: 4123	not reported	n/a		Yes	Informed DFO veterinarian. Letter sent.
Bedwell	29-Aug	Unreported ME	13-Jul-18	Mortality count: 6788; biomass: 7514 - daily uplifts are inefficient, a 10 day mort dive resulted in a 24 hours over threshold. All classified as olds and clean up post H2O2 treatment.	not reported	n/a		Yes	Informed DFO veterinarian. Letter sent.
Salten	09-Jul	Mis - reported ME	June 8 - 12, 2018	Mortality event reported as meeting the five day threshold of 10 tonnes from June 8 - 12. In fact a 24 hour mort event was met on June 9 (4261 kg) and again on June 11 (4192 kg)	mis reported	n/a	mis reported	Yes	Late report indicated on Compliance tracking
Shelter Pass	18-Jul	Unreported FHE (ongoing)	June 23 - July 3, 2018	Ongoing FHE not reported for MR treatment - FHE New reported in March and ongoing reports in April and May were submitted but not for the June/July treatment.				yes	Informed DFO veterinarian. Since in the new quarter should have been reported as a new event.
Shelter Bay	01-Jul	Unreported FHE (ongoing)	July/August 2017	These were discovered during audits in Q4 2017. They have been entered to the compliance tracking sheet as unreported ongoing FHE, not sure if any follow up with MHC occurred.	not reported	not submitted	not reported	Yes	informed DFO veterinarian. May not be an issue since the initial FHE in June was reported?
Heath	01-Jul	Unreported FHE	01-Feb-18	This was discovered last quarter, should have been added to the compliance tracking sheet	not reported		not reported	yes	treatment was opportunistic since fish were in a well boat to be split to other pens on site and not due to AGD diagnosis and therefore not considered a FHE
Venture Point	17-Sep	Unreported ME	22-Aug-18	Mortality count on August 22, 2018 was 943, biomass was 5854.8 kg, this was a dive day, mortalities were collected by uplift for the previous 18 days. Carcasses were classified as primarily environmental, predator, non performers. This site is experiencing lower oxygen levels	not reported		not reported	yes	Informed DFO veterinarian.

s.20(1)(b)